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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,628	12/08/2000	Masato Higashi	43890-448	3423

7590 09/19/2006  
Mcdermott Will & Emery  
600 13th Street NW  
Washington, DC 20005-3096

EXAMINER

RIMELL, SAMUEL G

ART UNIT	PAPER NUMBER
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2164

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/673,628	HIGASHI, MASATO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sam Rimell	2164	

All participants (applicant, applicant's representative, PTO personnel):

(1) Sam Rimell. (3) \_\_\_\_\_.

(2) Ramyar Farid. (4) \_\_\_\_\_.

Date of Interview: 13 September 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: Proposal of 9/13/06.

Identification of prior art discussed: \_\_\_\_\_.


Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner indicated that : (1) Proposed amendment will overcome all prior art of record. (2) A search update will be performed, and provided that no new prior art is identified, the claims submitted in this proposal will be allowable. (3) Applicant and examiner agree that the proposal will be submitted as part of an after final amendment. Assuming this same proposal is submitted, without any additional changes, the proposal will be approved for entry. (4) Examiner will contact Mr. Farid by telephone prior to the next action if any further issues arise which pertain to this proposal.

Docket No.: 43890-448

**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****RESPONSE UNDER 37 CFR 1.116**  
**EXPEDITED PROCEDURE**

In re Application of:

Masato HIGASHI

Serial No.: 09/673,628

Filed: December 08, 2000

For: DISK SYSTEM AND METHOD OF UPDATING FIRMWARE

: Customer Number: 20277

: Confirmation Number: 3423

: Group Art Unit: 2164

: Examiner: Samuel G. Rimell

**AMENDMENT UNDER 37 CFR 1.116**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated May 18, 2006, having a three-month shortened statutory period for response set to expire on August 18, 2006, and the petition for a one-month extension of time up to and including September 18, 2006 being filed concurrently herewith, reconsideration of the above-identified application is respectfully requested in view of the following amendment and remarks.

*Handwritten:* **Amend***Handwritten:* 252 756 -  
80 87

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**AMENDMENT TO THE CLAIMS**

1. (Currently amended) A disk system, comprising:

a computer composed of a plurality of disk devices, each having a first memory storing a firmware, and

an update program for updating specific information and firmware data of the firmware of said disk devices ~~in response to turning on a power source of the disk system,~~

wherein said computer operates to compare a parameter of the firmware stored in said first memories with each other in order to store a firmware of one of said plurality of disk devices in a second memory,

wherein firmware of another one of said plurality of disk devices is updated from the firmware stored therein prior to the update to the firmware stored in the second memory.

2. (Currently amended) A firmware updating method applied in a disk system comprising a computer composed of a plurality of disk devices each having a first memory storing firmware, and an update program for updating specific information and firmware data of the firmware of said plurality of disk devices, comprising:

a starting step of starting said update program ~~in response to turning on a power source of the disk system;~~

a comparing step of comparing a version of the firmware in the first memory with each other;

a first transmitting step of transmitting a firmware from the first memory of the

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one of said plurality of disk devices into a second memory coupled to said computer according to a result of the comparing, and;

a second transmitting step of transmitting the firmware stored in said second memory to another one of said plurality of disk devices, and the firmware of said another one of said plurality of disk devices is updated from the firmware stored therein prior to the update to the firmware stored in said second memory.

3. (Previously presented) The firmware updating method of claim 2, wherein each of said specific information is composed of a model name designating type of each of the plurality of disk devices, and a revision number showing the version of the firmware, and;

the firmware stored in said second memory is a firmware of a disk device having a latest revision number among said plurality of disk devices.

4. (Previously presented) The firmware updating method of claim 2, wherein each of said specific information is composed of a model name designating type of each of the plurality of disk devices, and a revision number showing a version of the firmware;

said firmware stored in the second memory is a firmware of a disk device having a latest revision number among disk devices having same model name of said specific information and different revision numbers among said plurality of disk devices, and;

said another one of said disk devices is a disk device having the same model name

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as the firmware stored in said second memory and different revision number from the firmware stored in said second memory .

5. (Previously presented) The firmware updating method of claim 2, wherein each of said specific information is composed of a model name designating type of each of the plurality of disk devices, and a revision number showing a version of the firmware;

said firmware stored in the second memory is a firmware of a disk device having a latest revision number among disk devices having version number in a specified revision number range and same model name of said specific information among said plurality of disk devices, and;

said another one of said disk devices is a disk device having version number in said specified revision number range, and having the same model name as the specific information stored in said second memory.

6. (Previously presented) The firmware updating method of claim 2, wherein each of said specific information is composed of a model name designating type of each of the plurality of disk devices, and a revision number showing a version of the firmware;

said firmware stored in the second memory is a firmware of a disk device having a latest revision number among disk devices having same model name of said specific information and different revision numbers in a specified revision number range among said plurality of disk devices, and;



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said another one of said disk devices is a disk device having the same model name as the firmware stored in said second memory and different revision number in said specified revision number range.

7. (Original) The firmware updating method of any one of claims 2, 3, 4, 5, and 6:

wherein said starting step is to start up said update program automatically when the power source of the disk system is turned on.

8. (Currently amended) A disk system, comprising:

a computer composed of a plurality of disk devices each having a first memory storing a firmware,

an update program for updating specific information and firmware data of the firmware of said disk devices ~~in response to turning on a power source of the disk system,~~ and

a second memory for storing a firmware of one of said plurality of disk devices,

wherein said computer operates to compare a parameter of the firmware stored in said first memories with each other in order to store the firmware of one of said plurality of disk devices in the second memory,

wherein the firmware for storing in the second memory is transmitted to the second memory from the first memory of the one of said plurality of disk devices and thereafter transmitted to another one of said plurality of disk devices so as to update the

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firmware of said another one of said plurality of disk devices from the firmware stored therein prior to the update to the firmware stored in said second memory.

9-10. (Canceled)

11. (Previously presented) The firmware updating method of claim 2, further comprising a comparing step of comparing a parameter of the firmware of the one of said plurality of disk devices to a parameter of the firmware of the disk device to be updated.

12-13. (Cancelled)

14. (Currently amended) A disk system, comprising:

a computer composed of a plurality of disk devices each having a first memory storing firmware, and

an update program for updating specific information and firmware data of the firmware of said disk devices, wherein said computer determines the latest version of firmware from the firmware of the plurality of disk devices and updates the firmware of each of said plurality of disk devices from the firmware stored therein prior to the update to said latest version.

15. (Currently amended) A firmware updating method applied in a disk system comprising a computer composed of a plurality of disk devices each having a first memory storing firmware, and an update program for updating specific information and

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firmware data of the firmware of said disk devices, comprising:

- a starting step of starting said update program;
- a determining step of determining the latest version of firmware from the firmware of the plurality of disk devices; and
- an updating step of updating the firmware of each of said plurality of disk devices from the firmware stored therein prior to the updating step to said latest version.

16. (New) The disk system of claim 1, wherein the update program updates the specific information and firmware data of the firmware of said disk devices in response to turning on a power source of the disk system.

18. (New) The firmware updating method of claim 2, wherein the starting step of starting said update program is performed in response to turning on a power source of the disk system.

19. (New) The disk system of claim 8, wherein the update program updates the specific information and firmware data of the firmware of said disk devices in response to turning on a power source of the disk system.

20. (New) The disk system of claim 14, wherein the update program updates the specific information and firmware data of the firmware of said disk devices in response to turning on a power source of the disk system.

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21. (New) The firmware updating method of claim 15, wherein the starting step of starting said update program is performed in response to turning on a power source of the disk system.

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REMARKS

In order to expedite prosecution, Applicants' representative initiated a telephone interview with Examiner Rimell. Applicants and Applicants' representative would like to thank Examiner Rimell for his courtesy in conducting the interview and for his assistance in resolving issues. A summary of the interview discussion follows.

Claims 1-8, 11, 14 and 15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Machida. This rejection is respectfully traversed for the following reasons.

During the interview, the Examiner indicated that the replacement disks of Machida were being read as updated disk devices. In order to clarify the distinction between Machida and the present invention, each of the independent claims have been amended to embody the firmware of the updated disk device as being updated from the firmware stored therein prior to the update. In contrast, the alleged updated disk devices of Machida (i.e., replacement disks) do not store firmware prior to the update used to determine the updating firmware. Instead, firmware of the replaced disk is compared with a reference disk device to determine whether the updated disk device takes the firmware of the replaced disk or the reference disk (*see* col. 10, lines 1-20).

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Machida does not anticipate the independent claims, nor any claim dependent thereon.

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Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102 be withdrawn.

#### CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicant submits that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,  
MCDERMOTT, WILL & EMERY

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## CLAIM AMENDMENT(S)

### *Listing of Claims:*

1. (Currently Amended) A computer implemented method comprising:  
creating an enhanced popularity score for a piece of information based on  
inflation factors applied to ~~uses~~ clicks of the piece of information, wherein the inflation  
factors weigh more recent ~~uses~~ clicks of the piece of information more heavily than older  
~~uses~~ clicks of the piece of information;  
ranking the piece of information among other pieces of information based on the  
enhanced popularity score; and  
generating a search report comprising the piece of information using the ranking.
2. (Canceled)
3. (Currently Amended) A computer implemented method comprising:  
receiving a request from a user to search a collection of information;  
determining a result of the search consisting of ranking the result based on an  
enhanced popularity score, wherein the enhanced popularity score for a piece of  
information weighs more heavily a newer ~~use~~ click for the piece of information than an  
older ~~use~~ click for the piece of information; and  
sending the result to the user.
4. (Previously Presented) The computer implemented method of claim 3 wherein  
said enhanced popularity score is created using adaptive inflation scoring.
5. (Previously Presented) The computer implemented method of claim 3 wherein  
said enhanced popularity score is created using blended inflation scoring.
6. (Currently Amended) An apparatus comprising:  
a database containing indexed information further containing an enhanced  
popularity score related to information contained in the database, wherein the

enhanced popularity score for a piece of information weighs more heavily a newer ~~use~~ click for the piece of information that an older ~~use~~ click for the piece of information; and  
a module for accessing the database to determine the results of a search requested from a user, wherein the results of the search consist of pieces of information ranked according to the enhanced population score.

7. (Original) The database of claim 6 wherein said information is a representation of data available over the Internet.

8. (Original) The database of claim 6 wherein said information is discrete data which is wholly contained in said database.

9. (Currently Amended) A computer implemented method of ~~generating an enhanced popularity score~~ comprising:

receiving a request from a user to search a collection of information;

collecting a ~~use~~ time history of clicks for a piece of information;

creating a modified ~~use~~ time history of clicks by applying a time decay rate to each ~~use~~ click in said ~~use~~ time history of clicks, wherein the time decay rate produces a value greater for a newer ~~use~~ click of the piece of information than an older ~~use~~ click of the piece of information; and

generating the enhanced popularity score for the piece of information based on the modified ~~use~~ time history of clicks;

determining the result of the search consisting of ranking the piece of information based on the enhanced popularity score; and

sending the result to the user.

10. (Currently Amended) The computer implemented method of claim 9, wherein said time decay rate is modified based on the time history of ~~historical use~~ clicks of the piece of information.



11. (Currently Amended) The computer implemented method of claim 9, wherein said enhanced popularity score is adjusted based on assessing actual ~~use~~ click rate of said piece of information against expected ~~use~~ click rate.
12. (Currently Amended) The computer implemented method of claim 10, wherein said historical ~~use~~ click is stored as a static value, wherein said static value may be adjusted periodically.
13. (Currently Amended) The computer implemented method of claim 10, wherein said time history of historical ~~use~~ click is reassessed dynamically.
14. (Currently Amended) The computer implemented method of claim 9, wherein said time decay rate is modified dynamically based on the rate of ~~use~~ click of said information.
15. (Currently Amended) A method comprising:  
receiving a request from a user to search a collection of information;  
assigning at least a high ~~use~~ click time decay rate and a low ~~use~~ click time decay rate to a piece of information;  
tracking a ~~use~~ click history of said piece of information;  
generating at least two hypothetical enhanced popularity scores based on said ~~use~~ click history and said high and low ~~use~~ click time decay rates, wherein the time decay rates produce a value greater for a newer ~~use~~ click of said piece of information than an older ~~use~~ click of said piece of information; ~~and~~  
generating an enhanced popularity score for said piece of information by applying a weighting factor to said hypothetical scores;  
determining the result of the search consisting of ranking the piece of information based on the enhanced popularity score; and  
sending the result to the user

16. (Currently Amended) The method of claim 15 wherein said weighting factor is based on the actual rate of ~~use~~ click of the piece of information.
17. (Currently Amended) The method of claim 16 wherein said enhanced popularity score is adjusted based on assessing actual ~~use~~ click rate of said piece of information against and expected ~~use~~ click rate.
18. (Currently Amended) The method of claim 16 wherein said piece of information is a website and said rate of ~~use~~ click is the traffic to said website.
19. (Original) The method of claim 18 wherein said traffic to said website is an estimated value.
20. (Currently Amended) A method ~~of using checksum coding~~, consisting of:  
receiving a request from a user to search a collection of information;  
placing a time and date code in a call to a tracking website; and  
reviewing the time and date code at the tracking website to determine whether to account for the website call in an enhanced popularity score, wherein the enhanced popularity score weighs more heavily a newer ~~use~~ click of a piece of information than an older ~~use~~ click of the piece of information;  
determining the result of the search based on the enhanced popularity score; and  
sending the result to the user.
21. (Original) The method of claim 20 wherein said step of determining whether to account for the website call comprises determining the time elapsed from the time said time and date code was generated.
- 22-27 (Canceled).